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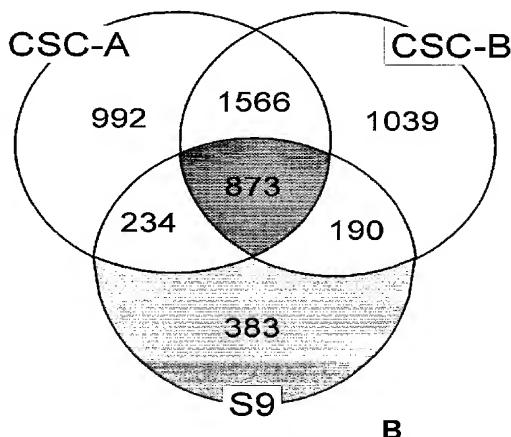
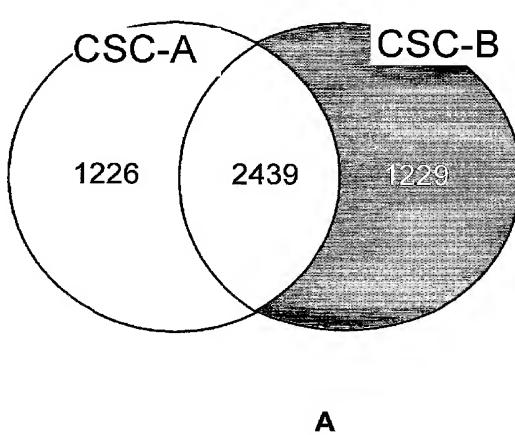
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(54) Title: GLOBAL GENE EXPRESSION ANALYSIS OF HUMAN BRONCHIAL EPITHELIAL CELLS EXPOSED TO CIGARETTE SMOKE, SMOKE CONDENSATES, OR COMPONENTS THEREOF



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(57) Abstract: Aspects of the present invention concern the identification of several methods to analyze the genes that are modulated in normal human bronchial epithelial (NHBE) cells after exposure to cigarette smoke condensates (CSC) or cigarette smoke (CS). Embodiments described herein include methods to identify a gene that is modulated in response to exposure to CSC or CS, methods to identify tobacco products that have a reduced potential to contribute to tobacco-related disease, methods to make tobacco products that have a reduced potential to contribute to a tobacco-related disease, methods to identify a subject's predilection to acquire a tobacco related disease, the use of particular genes as biomarkers for tobacco-related disease, and patterns of gene expression or genetic signatures that are unique to each particular tobacco product.